

COMMUNITY ASTRONOMY NIGHT

PASSPORT



As you complete the different activities,
get your passport stamped below!

Telescope Lab	Spy the Sky with a Galileoscope in the courtyard	Spin the Sky: Make a Planisphere	Touch a Piece of Space
Stars in Motion	Warped Space	Jupiter Up Close in the courtyard	Astro-photography with Robotic Telescopes
Space Quiz Adventure	Sun-Smart Bracelets	Exploring the Universe: Filtered Light	Be a Human Telescope

Cosmic Quiet Corner

A calm space for little learners or kids who need a break. Enjoy astronomy-themed coloring pages and books, explore the stars at your own pace, and relax while still discovering space!

LIGHTNING TALKS in the auditorium

Finding Habitable Worlds: Measuring the Size and Temperature of Low-Mass Stars

6:15 - 6:45 PM

Join Harvard student, CRLS Alum and former SRMP intern, **Alex Mahajan**, for a talk on how astronomers figure out the size and temperature of small, faint stars. She'll explain the tools and methods scientists use and why these measurements help us better understand stars and the planets that orbit them. Measuring these small stars is critical in the search for finding other habitable planets like Earth!

A Universe in Tension: Challenges to our understanding of the Universe

6:45 - 7:15PM

Join **Mouza Almualla**, a PhD candidate at the Center for Astrophysics | Harvard & Smithsonian, for a talk about how our Universe began and how it has changed over time. Scientists have a leading theory for how the Universe works — but new observations are raising questions that don't quite fit. We're seeing unexpected differences between what happened right after the Big Bang and what we can measure in the Universe today. Are these clues pointing to something brand new in physics, or are there simply things we don't yet understand? Come explore what these mysteries could mean for the future of cosmology.

Are We Alone: The Search for Extraterrestrial Life

7:15 - 7:45 PM

Join **Philippe Reekie** from the Center for Astrophysics | Harvard & Smithsonian for a short, engaging talk about the search for life beyond Earth and what alien life might look like. Learn about recent discoveries and what they tell us about the chances of finding life elsewhere, and also explore the surprising ways signs of alien life could last for millions—or even billions—of years.

ACTIVITY DESCRIPTIONS

Be a Human Telescope

Work together as a team to learn how telescopes see the sky! In this activity, participants become a “human telescope part” and see how images from the MicroObservatory are made. It’s a fun, full-body way to explore how scientists capture pictures of space.

Exploring the Universe: Filtered Light

Discover how scientists use colored filters to see different kinds of light from space! Most objects in the universe are far away, so we study them through the light they give off. Filters let us block some light and focus on others, revealing new details. In this activity, participants will explore filtered images and create their own colorful space pictures.

Jupiter Up Close (in the courtyard)

Take a closer look at our moon as well as Jupiter and its moons through an 8-inch Dobsonian telescope! See the planet’s stripes and watch its four largest moons orbit in real time. A fun way to explore a giant planet and feel like a real astronomer.

Astrophotography with Robotic Telescopes

Explore the universe with the MicroObservatory Robotic Telescopes! Get creative with these images of space then print them out and take them with you. You can also learn how you can keep taking your own images of amazing stars, galaxies, and nebulae from home!

Space Quiz Adventure

Test your knowledge of the universe in this fun 10-question quiz! Answer them all and win a special prize. Explore surprising space careers like Planetary Defense and see how much you know about the stars! Presented by the directors of The Space Consortium, organizers of Massachusetts Space Week.

Spin the Sky: Make a Planisphere

Create your own model of the night sky! You can adjust it to see how the stars appear to move in the sky over the course of one night, or during different times of the year. Take your planisphere home and explore the night sky all year long.

Spy the Sky with a Galileoscope (in the courtyard)

Use a Galileoscope to look at the Moon, stars, and planets in the night sky. See craters on the Moon and the moons of Jupiter, and discover the amazing details you can find through your own telescope.

Stars in Motion: Live Stacking (Astrophotography)

See faint stars, nebulae, and galaxies appear right before your eyes with live stacking. This digital imaging technique takes many short pictures and combines them in real time, making the night sky brighter and clearer—no waiting, just watch the universe unfold! *Live stacking will start 40 - 45 min after sunset. Sunset is at 6:46 pm.*

Sun-Smart Bracelets

Create your own UV bead bracelet and watch it change color in sunlight! Use your bracelet to do fun experiments and learn how the Sun’s rays affect our skin. A hands-on way to explore science and practice solar safety. Test your knowledge on the Sun, Solar Safety, how the Earth interacts with rays from the Sun with a Jeopardy! style quiz game. Learn about safe solar observing techniques!

Telescope Lab: Take It Apart & Put It Together

Put together and take apart a Galileoscope, a simple telescope inspired by Galileo. Learn how lenses and light work to make distant objects appear closer. By building it yourself, you’ll understand how telescopes let us explore the sky.

Touch a Piece of Space

In this hands-on activity, participants will get the chance to touch and examine real meteorites—rocks that have traveled through space and landed on Earth. You’ll learn how scientists study them, what they tell us about the solar system, and discover the differences between types of meteorites. It’s a unique way to connect with space and feel a piece of the cosmos in your hands!

Warped Space: Play with Gravity

Use a gravity table to explore how massive objects bend space. Roll balls on the stretchy surface and see how their paths curve around “planets” or “black holes.” A fun, hands-on way to learn about gravity, orbits, and the pull of black holes.

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This event is supported by:

